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ABSTRACT

To examine the role of friendship among children involved in potential conflicts, 37 aggressive, 37 non-aggressive, and 76 "intermediate" third- and fifth-grade boys were presented with a variety of potentially conflictual situations, nine in story form and one involving a contest. Each situation involved a negative or ambiguous outcome for the subject or a peer which resulted from the "ambiguously-intended" actions of another child who was either an aggressive or non-aggressive non-friend or a friend of the subject. Findings indicated that aggressive and non-aggressive subjects did not differ in the attributions they made regarding the actor's intent in either hypothetical or actual situations; nor were friends' actions interpreted or responded to differently from non-friends'. Friendship status and peer aggressiveness influenced predicted target responses when subjects were not themselves involved in the situations, suggesting that children take these factors into account. In the contest situation, aggressive subjects were thought by their partners to have acted with more hostile intent than non-aggressive subjects. Regardless of attribution, aggressive subjects generally predicted more aggressive responses by targets, including themselves, than did non-aggressive subjects. It is concluded that the pattern of aggressive responses following non-aggressive attribution is inconsistent with a cognitively based explanation of aggressive behavior. (RH)

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Friendship and Aggressiveness As Determinants of Conflict Outcomes in Middle Childhood

by

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Conflict between peers is a fact of life throughout childhood. It occurs among children of both sexes, from preschool age on, between friends and non-friends alike, whenever "one person does something to which a second person objects" (Hay, 1984, p 2). Defined in this way, conflict entails a dyadic exchange in which the actions of one child are responded to with opposition by another. The first child need not have intended to offend the second for conflict to arise. However, if offense is intended, but none is taken, no conflict can be said to exist. An oppositional or antagonistic response by the offended party is thus a defining feature of conflict (Shantz, 1987).

When a potentially conflictual situation occurs, a child's interpretation of that situation, particularly his or her understanding of a peer's intentions in acting the way he or she did, has been shown to be important in determining the child's response (Darley, Klosson & Zanna, 1978; Dodge, Pettit, McClaskey & Brown, 1986; Mallick & McCandless, 1966; Rule, Nesdale & McAra, 1974). If a child has a negative experience and believes that the individual responsible acted with hostile intent, the child is likely to respond with hostility. In contrast, if a child experiences a similar negative event but views the responsible peer as having acted benignly, he or she is likely to respond in a non-hostile manner.

Several studies have shown that such attributions of intent, which influence a child's response to objectionable behavior, are in turn influenced by the reputation of the individual whose behavior is being interpreted (Dodge, 1980; Dodge & Frame, 1982; Steinberg & Dodge, 1983). In these studies, children identified by peers as aggressive were more likely to have their behavior labeled as hostile than were non-aggressive children, even though the behavior being interpreted was the same.

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These tendencies to attribute hostility to aggressive peers and to respond in kind to hostilely-intended actions may be moderated by the relationship existing between two children. The rate with which conflicts occur and the ways in which conflicts are managed differ for friends and nonfriends (Hartup, in press). One reason for this may be that behavior is interpreted differently depending on whether it is performed by a friend or an acquaintance, with friends more likely to be given "the benefit of the doubt." Indeed, one investigator found that children "vary their perceptions and explanations of the behavior of peers as a function of whether they like or dislike the individual" (Hymel, 1986, p.442). Alternatively, the presence of friendship between two children may serve to inhibit hostile responses to objectionable behavior, and/or to increase the likelihood that the injured party will just "shrug off" the offence. To clarify this question, the present study examines the role played by friendships existing between the children involved in potentially conflictual situations.

In previous studies of children's responses in potentially conflictual circumstances, aggressive children have been found to be biased in their interpretations of events, being more likely than non-aggressive children to attribute hostile intent to peers, even though their intentions were, in fact, ambiguous (Aydin & Markova, 1979; Dodge, 1980; Steinberg & Dodge, 1983). While this bias seems to be present only when aggressive children are asked to judge behavior directed toward themselves (Dodge & Frame, 1982), it is not known whether the bias appears in the aggressive child's interpretations of events involving a friend. Indeed, little is known about the friendships of aggressive children, and whether or not they differ from those of their non-aggressive peers. Both aggressive and non-aggressive children were thus included in the present sample so that differences in their friendships, as well as in their interpretations and responses to ambiguously-intended actions, could be explored.

This interaction between aggressiveness and friendship in determining children's

attributions and behaviors was examined in two ways, one involving the presentation of hypothetical situations to the subjects, and the other involving an actual conflict situation. First, aggressive and non-aggressive boys were presented with short descriptions of encounters between peers in which one child experienced a negative outcome as a result of the ambiguously-intended actions of another. In some of these stories, the subjects themselves were the targets of the unpleasant events, in others, the targets were friends of the subjects, or aggressive or non-aggressive non-friends. The role of the actor or "perpetrator" of the ambiguous actions in these stories was systematically varied to include the friend of the subject as well as aggressive and non-aggressive non-friends. For each of the different stories and target-actor combinations, the subjects were asked to interpret the actor's intentions and to predict what the response of the target child (at times the subject himself) would be.

Second, these same aggressive and non-aggressive subjects competed against either friends or non-friends in a block-building contest. During the course of this competition, each participant discovered that his construction-in-progress had been destroyed while his opponent was alone with it. Each child's interpretation of what had happened in this situation was then assessed. These two procedures made it possible to examine the way in which attributions and responses in potentially conflictual situations are influenced by the social relationship existing between the two children, and by their aggressiveness.

METHOD

Subjects

The subjects in this study were 38 3rd-grade boys and 36 5th-grade boys, equally divided within each grade among aggressive and non-aggressive boys, selected from four middle class, suburban elementary schools. Each of these subjects also had a partner for the

block-building situation, a classmate who did not qualify as either an aggressive or non-aggressive subject.

Following a procedure similar to that used by Dodge & Somberg (1987), selection of subjects was made on the basis of both peer nominations and teacher ratings from among the 302 3rd-graders (in 12 classrooms) and 337 5th-graders (in 13 classrooms) for whom parental consent to participate was obtained. Using alphabetical lists of participating classmates, these children identified their best friends (as many as they wished), as well as three peers who fit each of three behavioral descriptions. One of these items asked the children to "Circle the names of 3 students who start fights and hit other children," while the other two items described prosocial behavior. The children also rated their degree of liking for each of their classmates, on a scale ranging from 1 ("don't like") to 5 ("like very much, as much as a best friend"). A "social preference" score was then calculated for each child by subtracting the number of ratings of 1 they received on this liking scale from the number of 4's and 5's. In addition, teachers completed the Teacher's Checklist of Peer Relationships (Dodge, 1986), consisting of a 6-item social competence scale and a 5-item aggression scale, for the boys in each classroom.

Selection of Subjects. To be considered as a potential aggressive subject, a boy had to have a social preference score below the class mean, a teacher-rated social competence score below the class mean, and a teacher-rated aggression score above the class mean. From this pool, the 20 boys in each grade who had the highest peer nomination scores for starting fights and hitting other children (defined as the number of nominations received divided by the number of classmates making nominations) were selected as aggressive subjects. To be considered as a potential non-aggressive subject, a boy had to meet criteria which were the inverse of those used to define the aggressive subject pool. Twenty non-aggressive subjects from each grade were then chosen at random from this group.

Of the 80 aggressive and non-aggressive subjects originally selected according to the

procedure just described, six did not participate in the study, either because of absences on days when data were collected, or, for one pair, because the experimental manipulation in the block-building task was inadvertently disclosed by a teacher. The 37 aggressive and 37 non-aggressive subjects who participated differed significantly in peer nomination scores for aggression, $F(1,70) = 186.57, p = .000$. The mean peer nomination score for aggressive subjects was .57, S.D. = .22, while for non-aggressive subjects it was .04, S.D. = .07.

Selection of Contest Opponents. Each subject was paired with a male classmate against whom he competed in the block-building contest. These opponents were chosen from among those boys in each class who did not meet the criteria to qualify for consideration as either aggressive or non-aggressive subjects (i.e., from a pool of boys intermediate in aggressiveness between the aggressive and non-aggressive subjects). For half of the subjects their contest opponents were friends, and for the other half, non-friends. To be selected as a friend, a boy had to be nominated by the subject as a best friend, and be given a rating of at least 4 on the 1-to-5 liking scale. To be selected as a non-friend, a boy had to be omitted from the list of best friends named by the subject, and be comparable in level of aggression to a friend opponent of one of the subjects¹.

Materials

In Part 1 of the study, nine different stories depicting potentially conflictual situations were read to each subject. Each story involved an incident in which a child (the target) experiences an unpleasant outcome (e.g., being hit in the back with a ball) as a result of the ambiguously-intended actions of another child (the "actor"). A similar approach has been used by Dodge (1980), Dodge & Frame (1982), and Sagar & Schofield (1980). Two examples of stories used in this study are given below.

Imagine that you are drinking from a water fountain at school,
and(the actor) comes rushing down the hall. As he passes

by, he bumps you in the back, and your face is knocked into the water, and gets all wet. When you turn around, the other kids see how wet you are

Imagine that(the target) is out on the playground playing tag with several other boys.(the actor) is it and he is chasing after(the target). When he tags(the target), ...(the target) falls down and scrapes his knee. Some girls standing nearby giggle.

The stories were written in such a way that the identities of the actors and targets could be specified. In each story, the target was identified as either the subject himself (as in the first example above) or as a specific classmate of his (as in the second example), while the actor was always a classmate².

For each subject, three different classmates were chosen to be included in the stories, one to fit each of the following categories: (a) friend, (b) aggressive non-friend, and (c) non-aggressive non-friend. (The criteria for selecting classmates for each of these roles are described below.) With four individuals who could fill the target role (i.e., subject, friend, and aggressive and non-aggressive non-friends) and three individuals who could fill the actor role (i.e., friend and aggressive and non-aggressive non-friends), nine different target-actor combinations can be identified:

<u>TARGET</u>	<u>ACTOR</u>
1) subject	friend
2) subject	aggressive non-friend
3) subject	non-aggressive non-friend
4) friend	aggressive non-friend
5) friend	non-aggressive non-friend
6) aggressive non-friend	friend
7) aggressive non-friend	non-aggressive non-friend
8) non-aggressive non-friend	friend
9) non-aggressive non-friend	aggressive non-friend

Each of these different combinations was used in one, and only one, of the nine stories presented to each subject. The nine stories and the nine target-actor combinations were systematically varied so that each pairing of story and dyad occurred equally often. (The order in which the stories were presented to the subjects was also systematically varied, to eliminate any order or position effects of either story or target-actor combination.)

Packets containing the nine hypothetical situations were individually prepared for each subject in advance, since the identities of the friend and the aggressive and non-aggressive peers, and thus the names of the targets and actors in a given story, were unique to each child.

Selection of Story Participants. Information from the sociometric questionnaires used to select the subjects was also used to identify the subjects' classmates who would serve as the friend and the aggressive and non-aggressive non-friends in the stories. To be selected as a friend, a boy had to be nominated by the subject as a best friend, and be given a rating of at least 4 on the 1-to-5 liking scale. The boy in the class with the highest peer nomination score for aggression who was not named as a best friend of the subject (or was not the subject himself) served as the aggressive non-friend of the subject. The non-aggressive non-friend of the subject was chosen from among those who had qualified for the non-aggressive subject pool, unless all of these children had been nominated as a best friend in which case the boy in the class with the lowest peer nomination score for aggression who was not named as a best friend was selected.

Procedure

All data collection occurred at the subjects' schools. Both parts of the study, i.e., the presentation of hypothetical stories and the potential conflict situation, took place during single 45-minute sessions. Children were escorted from their classrooms in pairs, one child in each pair being an aggressive or non-aggressive subject, and the other a child

intermediate in aggression who would serve as the subject's opponent in the block-building contest. The investigators did not know which of the two children in each pair was the subject, whether the subject in a given pair was identified as aggressive or non-aggressive, nor whether the two children in the pair were identified as friends or non-friends. Each pair of children met with the two investigators (the first two authors), who explained the two parts of the study to them. After being given an opportunity to ask questions about the procedure, each child went with one of the investigators for the story presentation.

Part 1 - Hypothetical Situations. At the start of these individual interviews, the investigator explained that several short stories would be read to the child, that in some of these the child himself would be a part of the story, and that other children in his class would be in them as well. The child was then asked to listen carefully, because he would be asked some questions about each story when it was over. After each story, the child was asked, first, "How do you think this happened?" to elicit his attributions about the actor's behavior in the situation, and, second, "What do you think _____ would do next?" to elicit his predictions about the way the target of the offending action (at times himself) would respond. The child's responses were recorded verbatim, and were probed, when necessary, in a non-leading manner until his interpretations of the actor's and/or target's intentions (i.e., hostile vs. non-hostile) were clear. After the child had responded to all nine stories, he was reminded that these incidents were imaginary, and he and the investigator returned to the room in which the block-building competition would take place.

*Part 2 - Conflict Situation.*³ When the two children were together once again, they were each seated in front of a pile of approximately 25 wooden blocks of various sizes and shapes. They were told that they would be given five minutes to build the most imaginative creations they could, and at the end of this time the investigators would award a prize to the winning child. The children were given an opportunity to ask questions, and then told to begin as the investigators left the room.

One of the investigators (Investigator A) returned to the room after approximately two minutes, when the child he or she had interviewed (Child A) had built something using about half of his blocks, and explained that he or she had forgotten to ask the child some questions during their earlier interview.⁴ The child was asked to interrupt his block-building and come with the investigator so they could finish the interview, while his opponent continued to work. The child was assured, however, that he would be given enough time to finish his building after this second interview was completed.

Returning to where they had sat during the story presentation, the investigator asked Child A a series of questions about his relationship with his best friend in his class. While this was going on, unknown to Child A, Investigator B entered the contest room and interrupted Child B, who was still working on his building, explaining that he or she had also forgotten to ask some questions. Like the other investigator and child, they too needed to return to their previous location to complete the interview. However, before they were able to get started, Investigator B realized that his or her pen had been left in the room, and went back, alone, to get it. While retrieving the pen, and with the door closed, Investigator B quietly knocked down the blocks built up by Child A, in such a way that they looked like they could have either fallen by themselves or been knocked down. Investigator B then rejoined the waiting child.

At this point Investigator A completed his interview with Child A and returned with him to the site of the competition. When they arrived, they discovered that Child A's building was in ruins. The investigator, looking surprised, commented that "I thought the thing you were making was bigger than that." If the child did not respond, or responded in such a way that his interpretation of the event was unclear, the investigator asked, "What do you think happened?" The investigator continued to probe in a non-leading manner until the child's attributions about his opponent's intentions were clear (i.e., he indicated that he believed that either Child B had intentionally knocked down the blocks, or that they

had been disturbed accidentally or fallen by themselves). If, after several probes, the child still did not provide a clear interpretation of what had happened, the matter was dropped, and the child was scored as having made a non-hostile attribution.

Child A was then given an opportunity to rebuild his structure, and was provided with the entire five minutes he had originally been promised. When he was finished, the investigator and child again returned to the interview location, so they could talk some more about Child A and his best friend. However, Investigator A noticed that his or her pen had been left in the contest room, and went back to retrieve it. While he did so, he knocked down Child B's blocks. Investigator B then returned with Child B, and went through the same procedure with him that has already described in reference to Child A.

After Child B completed his rebuilding, the two children were debriefed. The investigators explained that they had knocked down each child's blocks, and that this was done because they were interested in learning about how children react when bad things happen to them. The children were given an opportunity to ask questions about the procedure, and then both were awarded a prize. Before being returned to their classroom, the children were questioned about whether they had been aware of the manipulation (no children were), and were asked not to reveal what had happened.

RESULTS

Each child participating in this study responded to two questions about each of the nine hypothetical situations, the first asking about the intentions of the actor, and the second about the response expected of the target. Each child also made attributions about the behavior of his opponent in the actual conflict situation. Responses describing the actors' intentions in the hypothetical situations and in the block-building contest were coded as "1" (hostile) if the child attributed hostile or negative intent to the actor, or as "2" (non-hostile)

if the child explained the actor's behavior or the outcome in any other way (e.g., "it was an accident" or "someone else made him do it"). If the child could not or would not explain what had happened, his response was coded as non-hostile. Similarly, the subjects' predictions about responses by the targets were coded as either hostile (e.g., "hit him back" or "tell the teacher, to get him in trouble") or non-hostile (e.g., "forget about it," "just get mad," or "ask the teacher for help"), depending on the intended effect of the response (negative vs neutral or positive) upon the actor.

All responses were blindly coded by the first author, and a random selection of 40% of the responses was also blindly coded by the second author. Agreement between the two coders was 95% for attributions in the hypothetical situations, 96% for predicted responses in the hypothetical situations, and 94% for attributions in the actual conflict situation. Cohen's kappa (Cohen, 1968), which corrects for chance agreement, was also computed for these three categories of responses, yielding reliabilities of .86, .92 and .79, respectively. The scores coded by the first author were used as the dependent measures in the analyses.

Part 1 - Hypothetical Situations

Attributions of Intent. A 2 (grade of subject) $\times$ 2 (aggressiveness of subject) $\times$ 9 (target-actor combination, or "dyad") analysis of variance (ANOVA) was used to assess the subjects' interpretations of the actors' behavior in the hypothetical situations. The first two of these variables are between-subjects variables, while the third is a within-subjects variable. The dependent measure was the level of hostility attributed to each actor. Since each subjects' responses were scored as either hostile or non-hostile, group means directly reflect the percentage of subjects making each attribution. Table 1 presents the percentage of subjects making hostile attributions for each of the nine different target-actor combinations.

In contrast to earlier studies, our aggressive and non-aggressive subjects did not

differ in the number of hostile attributions they made, although there was a trend in that direction ($F(1,70) = 2.30, p = .134$). Nor was there a significant dyad effect, indicating that in general the subjects did not interpret the actors' behavior differently depending on who the actors were. The only significant effect found was a grade $\times$ dyad interaction, $F(8,63) = 2.37, p = .027$. For the dyad involving the aggressive non-friend as the actor and the non-aggressive non-friend as the target of his behavior, significantly more 3rd-graders than 5th-graders attributed hostile intent to the actor, $F(1,70) = 6.35, p = .014$. No other differences between 3rd- and 5th-graders were found.

Predicted Responses: As above, a 2 (grade of subject) $\times$ 2 (aggressiveness of subject) $\times$ 9 (target-actor combination, or "dyad") ANOVA was used to assess the subjects' predictions of the targets' responses in the hypothetical situations. In this analysis, the dependent variable was the hostility of the predicted responses. Table 1 presents the percentage of subjects predicting hostile responses for each of the nine different target-actor combinations. Aggressive subjects were found to be more likely to predict hostile responses than non-aggressive subjects, $F(1,70) = 10.56, p = .002$. A main effect for dyad was also found, indicating that different responses were predicted for the targets depending on who they were and who they were responding to, $F(8,63) = 7.28, p = .000$. However, these effects were qualified by a significant grade $\times$ aggressiveness $\times$ dyad interaction, $F(8,63) = 3.59, p = .002$.

Analyzing the results separately for each grade yielded significant differences between aggressive and non-aggressive subjects at both the 3rd- and 5th-grade levels, with aggressive subjects being more likely to predict hostile responses than non-aggressive subjects in both cases ($F(1,70) = 5.67, p = .02$, for 3rd-graders, and $F(1,70) = 4.91, p = .03$ for 5th-graders). Significant dyad effects were also found for both grades ($F(8,63) = 4.37, p = .000$ for both 3rd- and 5th-graders), indicating a sensitivity to the identity of those involved in the situation. In addition, a significant aggressiveness $\times$ dyad effect was found for

3rd-graders, $F(8,63) = 3.82$, $p = .001$, but not for 5th-graders, indicating that, among the younger children, the relation between the predictions of the aggressive and non-aggressive subjects depended on the particular target-actor combinations involved. This finding is discussed in greater detail below.

Other breakdowns of the three-way interaction revealed that: (a) aggressive children in the 3rd and 5th grades made similar but discriminating predictions for the various target-actor combinations, while the non-aggressive 3rd- and 5th-graders predicted different responses depending on the combinations involved ($F(8,63) = 3.79$, $p = .001$); and (b) when the responses of the aggressive and non-aggressive subjects were analyzed separately for each grade, only the aggressive children in 3rd grade did not discriminate in their predictions as a function of target-actor combination. The other three groups of subjects (i.e., the non-aggressive 3rd-graders, and both the aggressive and non-aggressive 5th-graders) made significantly different predictions in response to variations in the target and actor involved in the hypothetical situations.

It was noted above that a significant aggressiveness $\times$ dyad interaction was found for 3rd-graders, although not for 5th-graders. Among the 3rd-graders, comparisons between the aggressive and non-aggressive children's predictions for each of the dyads showed that, for four of the target-actor combinations (i.e., self responding to friend, self responding to non-aggressive peer, friend responding to non-aggressive peer, and non-aggressive peer responding to friend), aggressive subjects predicted hostile responses more frequently than non-aggressive subjects. These were the only four dyads that did not involve an aggressive peer as either target or actor. For four other dyads (i.e., self responding to aggressive peer, friend responding to aggressive peer, non-aggressive peer responding to aggressive peer, and aggressive peer responding to friend), no difference between aggressive and non-aggressive 3rd-graders was found. For the remaining dyad (aggressive peer responding to non-aggressive peer), significantly more non-aggressive than aggressive

3rd-graders predicted hostile responses.

In order to explore the meaning of the finding that the different target-actor combinations were responded to in different ways by the subjects (with the exception of the aggressive 3rd-graders, who responded to each of the dyads in the same way), a series of planned comparisons between dyads having a target or an actor in common were carried out. For example, predictions about the way in which the subject himself would respond to his friend were compared to predictions about the way the subject would respond to an aggressive non-friend, to determine if the identity of the person being responded to influenced the way in which the subject expected himself to respond. Similar comparisons were made holding the actor constant while varying the target. Since no dyad effect was found for the aggressive 3rd-graders, they were not included in these analyses. Instead, planned dyad-by-dyad comparisons were carried out separately for the non-aggressive 3rd-graders and for the 5th-graders as a group.⁵

The results of these comparisons reveal different patterns of predictions for the 5th-graders and the non-aggressive 3rd-graders. The 5th-grade subjects consistently predicted that they would respond in a less hostile manner than their friends and their aggressive and non-aggressive non-friends. This pattern held true regardless of the identity of the person they were responding to. While the 5th-graders differentiated themselves from everyone else in their predictions, they did not make any distinctions among the other three targets; i.e., all three were expected to respond with approximately the same level of hostility, and this remained constant regardless of the person being responded to. The pattern of predictions was clearly different for the non-aggressive 3rd-graders, who consistently expected the aggressive peer to respond in a more hostile manner than themselves, their friends or their non-aggressive peers; they did not distinguish among these three. In addition, the non-aggressive 3rd-graders made distinctions in their predicted responses on the basis of the identity of the person being

responded to, predicting that the aggressive peer would be responded to in a more hostile manner than the non-aggressive peer by both themselves and their friends.

Linkage between Attributions and Predicted Responses. As described earlier, previous investigations have found children's responses to peer behavior to be significantly influenced by the interpretations made regarding the peers' intentions. To determine whether such a linkage occurred in this study, contingency tables were constructed for each of the nine different target-actor combinations showing the association between the hostility of the subjects' attributions and their predicted responses. As shown in Table 2 hostile attributions were followed by hostile predicted responses 66% of the time overall, although this percentage ranged from 50% to 79%, depending on the dyad involved. Likewise, non-hostile attributions were followed by non-hostile predicted responses an average of 64% of the time, with a range of 43% to 83% depending on the dyad. Chi square tests of independence between the hostility of the subjects' attributions and their predicted responses support this overall impression of linkage between the two, as six of the nine tests (one for each dyad) showed a significant association.

Inspection of Table 2 shows that, of the three target-actor combinations for which a significant association between hostility of attributions and predicted responses was not found, two of them involved dyads in which subjects were asked to predict the responses of their aggressive peers. The lack of consistency between attributions and predicted responses for these dyads appears to have been due to a tendency for the subjects to "over-predict" hostile responses; i.e., for the aggressive peers, hostile responses were expected to follow both hostile and non-hostile attributions with greater than usual regularity. This point is underscored by the fact that subjects predicted the aggressive non-friends to respond in a hostile manner approximately 60% of the time, while their mean rate of predicting hostile responses for all targets was only 44%, as shown in Table 1.

The far-right column in Table 2 contains additional data on the linkage between

attributions and predicted responses which deserves careful consideration. Despite the general tendency for hostile attributions to be followed by hostile response predictions and non-hostile attributions to be followed by non-hostile predictions, the figures presented in this column indicate that most predicted hostile responses were not preceded by hostile attributions. In fact, the opposite is true: most predicted hostile responses followed non-hostile attributions. Although this would appear to contradict the observed tendency for consistency to exist between attributions and predicted responses, it is a necessary consequence of the fact that only 25% of all attributions were hostile, while hostile predicted responses accounted for 44% of the total number of responses. (See Table 1.) This finding suggests that hostile behavior cannot be adequately predicted or explained by reference to the attribution that preceded it.

Since the aggressive and non-aggressive subjects did not differ in the number of hostile attributions they made, but did differ in the number of hostile responses they predicted, it appeared possible that the relation between attributions and predicted responses might vary for these two groups. Log-linear analyses of the association between attributions and predicted responses, with subject aggressiveness as a third factor, were therefore conducted. These analyses showed that there was not a significant 3-way interaction between attribution, prediction and subject aggressiveness for any of the nine target-actor combinations. This indicates that the association between attribution and predicted response was the same regardless of the aggressiveness of the subjects.

Part 2 - Conflict Situation

A 2 (grade of subject) $\times$ 2 (aggressiveness of subject) $\times$ 2 (relationship with opponent, i.e., friend or non-friend) ANOVA was used to assess the subjects' interpretation of the ambiguously-caused negative outcome in the block-building contest. No significant main effects or interactions were found. Non-hostile attributions were made by 81% of aggressive

subjects and by 82% of non-aggressive subjects, while 79% of the subjects paired with a friend made non-hostile attributions, compared with 83% of those paired with a non-friend. Similar percentages were found for 3rd- and 5th-graders.

The interpretations of the subjects' opponents (who were intermediate in aggression relative to the aggressive and non-aggressive subjects) were also analyzed. Neither grade nor friendship was found to be a significant factor in the hostility of the opponents' interpretations. However, the aggressiveness of the subject against whom the opponent was competing significantly affected these interpretations, $F(1,68) = 6.00$, $p = .017$, with more hostile attributions made toward aggressive than non-aggressive subjects, 41% to 13%.

DISCUSSION

What are the factors that determine how a child responds when he finds himself to have suffered a negative experience at the hands of another child whose intentions are unclear? What determines whether or not conflict will ensue? In this study, we examined the role played by relationships, reputations, attributions and aggressiveness in answering these questions.

In both hypothetical and actual conflict situations, the attributions made by 3rd- and 5th-grade boys about the behavior of their peers were not influenced by the presence or absence of friendship between themselves and the child whose behavior they were required to interpret. No distinctions were made between friends and non-friends. Similarly, when the subjects were asked to predict how they would respond to the hypothetical provocations, friends were not singled out for treatment different from that to be accorded to non-friends. The social relationship existing between two children, therefore, does not appear to be an important factor in determining how one child will respond to the objectionable behavior of another. Since the rate of occurrence of conflict and the way conflict is managed differ for friends and non-friends (Hartup, in press), it

would appear, based on the results obtained here, that these dissimilarities are the product of differences located elsewhere in the chain of events associated with the occurrence of peer conflict. For example, it may be that potentially conflictual situations simply occur at different rates between friends than between non-friends. Alternatively, a child whose behavior has been objected to may respond differently to that objection depending on whether it comes from a friend or non-friend.

The lack of differentiation in attributions and predicted responses for friends and non-friends found here may appear to contradict the results of a recent study by Hymel (1986), in which 2nd- and 5th-grade children were found to interpret the behavior of liked and disliked children differently. A number of differences in methodology may account for this apparent discrepancy between the two studies. Perhaps the most important of these differences is that the comparison being made in the present study was between friend and non-friend, not between liked and disliked peers. While the friends of the subjects were clearly liked, the aggressive and non-aggressive non-friends were not necessarily disliked. It may be that it is the presence or absence of liking, and not of friendship, that is the determining factor in whether or not a peer is given the benefit of the doubt in ambiguous situations. Further research should be undertaken to clarify this point.

Indications were mixed on the role played by a child's reputation for aggressiveness in determining how he would be responded to in a potentially conflictual situation. In the hypothetical situations, attributions about the behavior of boys identified by their peers as aggressive did not differ from attributions concerning non-aggressive boys. However, in the actual conflict situation, aggressive subjects were more than three times as likely as non-aggressive subjects to have hostile intentions attributed to them, indicating a strong bias against them. Such a bias was also evident among the non-aggressive 3rd-graders (although not among the 5th-graders or the aggressive 3rd-graders) in their predicted responses to the negative outcomes in the hypothetical situations. They expected themselves

(and also their friends) to respond with hostility more often toward aggressive peers than toward non-aggressive peers.

Further indication of a bias against peers with an aggressive reputation can be found in the non-aggressive 3rd-graders' singling out of aggressive peers in the hypothetical situations as more likely to respond in a hostile manner to a negative outcome than themselves, their friends, or their non-aggressive peers. Hostile responses were predicted at a higher-than-average rate for aggressive peers overall, providing additional evidence of a biased (though perhaps realistic) view of aggressive children. As Dodge (1980, 1986) has said, these negative expectations peers have of children with aggressive reputations may help to elicit hostile behavior from them, and so perpetuate their aggressiveness. Such expectations may also make it difficult for aggressive children to change their behavior, as they may lead peers to avoid interacting with them, thereby precluding opportunities for noticing and reinforcing any new behavior they exhibit (Sancilio, in press). Alternatively, "out-of-character" behavior by aggressive children may be discounted by their peers, and attributed to unstable, situational causes rather than stable, internal ones, making attitude changes toward such children less likely (Hymel, 1986).

In contrast with previous studies, our aggressive subjects did not show a bias toward making hostile interpretations of peer behavior in either the hypothetical or actual conflict situations. Despite this absence of differences in the attributions of aggressive and non-aggressive subjects, the former "lived up to" their aggressive reputations by generally predicting more hostile behavior by themselves (and others) in response to negative outcomes. This pattern of results is inconsistent with a cognitively-based explanation of hostile or aggressive behavior, which would predict differences between the aggressive and non-aggressive subjects in both attributions and predicted responses.

Since the aggressive children in this study were more likely to predict hostile responses without being more likely to make hostile attributions, one could infer that they

were disregarding their attributions in making their response predictions (or at least using them differently than their non-aggressive peers). In other words, it would appear that the aggressive subjects had a hostile bias in their response predictions. If this were the case, however, the association between attributions and predicted responses should have differed for the aggressive and non-aggressive groups in this study, but it did not. How, then, if the aggressive subjects showed neither an attributional bias, nor a disregard for their attributions (i.e., a response bias), could their responses have differed from those of the non-aggressive subjects?

The answer to this question appears to be that, in fact, the aggressive subjects showed biases in both their attributions and their responses, but they were relatively "small" biases that individually were insignificant but, in combination, had a sizeable effect. Thus, a statistically non-significant tendency for the aggressive children to show a hostile bias in their attributions combined with another statistically non-significant tendency for them to show a hostile bias in their response selection, resulting in the statistically significant difference found between the predictions of the aggressive and non-aggressive children. A bias toward hostile attributions, therefore, may be part of the reason aggressive children behave the way they do, but there appears to be, in addition, a tendency toward hostile or aggressive responding over and above what can be explained by an attributional bias.

Further evidence that hostile behavior cannot be adequately explained by the attribution that preceded it is provided by the finding that there were more predictions of hostile behavior by the children in this study than there were hostile attributions. Indeed, the majority of hostile predicted responses were preceded by non-hostile attributions.⁶ This was true even when the subjects were predicting their own behavior (although not as strongly as when they were predicting others' behavior). It is easy to overlook this finding in the face of the significant association generally found between attributions and predicted responses, which suggest that the attributions explain the behavior. Knowing

that such an association exists, one would clearly be correct, given a hostile attribution, in predicting a hostile response, and, given a non-hostile attribution, in predicting a non-hostile response. Since most hostile responses followed non-hostile attributions, however, this strategy would cause one to fail to predict most hostile behavior. In other words, the majority of hostile behavior cannot be explained by an attributionally-based model. One's predictive accuracy could probably be improved by anticipating more hostility when an aggressive child is the one doing the responding or (at least for non-aggressive 3rd-graders) when an aggressive child is being responded to. Nevertheless, the present data clearly challenge the adequacy of an attributionally-based explanation of hostile or aggressive behavior for both aggressive and non-aggressive children.

Another question addressed by this study concerned whether any attributional or response biases present in the subjects would be applied equally whether or not the subject himself was involved in the potentially conflictual situation. Our results showed that the presence or absence of the subject in the hypothetical situation did not affect the attributions that they made. Predicted responses, however, were influenced by whether or not the subject himself was involved in the hypothetical incident, at least for the 5th-graders. They saw themselves as responding to negative outcomes with less hostility than any of their peers. Similar results were obtained by Dodge and Frame (1982), who compared the responses predicted by subjects for themselves with those predicted for an unspecified peer. Third-graders in the present study, however, did not make such a distinction between themselves and others. Aggressive 3rd-graders made no distinctions at all, while non-aggressive 3rd-graders differentiated aggressive peers from themselves, their friends and their non-aggressive peers. The reasons for these differences are unclear.

Finally, no clear differences between the aggressive and non-aggressive subjects' relationships with their friends emerged from the data. The similarities and differences

that were found to exist between the two groups cut across the friend/non-friend dimension, suggesting that, if there are differences in the friendships of aggressive and non-aggressive children, they are not manifested in their attributions and responses in potentially conflictual situations. More research is certainly needed, however, about the peer relationships and friendships of aggressive children.

ENDNOTES

¹This requirement was included to insure that the aggressiveness of the friend and non-friend opponents was comparable, so that any differences that might be found in the interpretations made by or about the two groups would be attributable to relationship differences, and not differences in aggressiveness. Analogously, to make sure that the non-friend opponents of the aggressive and non-aggressive subjects did not differ in aggressiveness, half of the non-friend opponents of aggressive subjects were matched in level of aggressiveness to friend opponents of aggressive subjects, and half to friend opponents of non-aggressive subjects. The same procedure was followed for the non-friend opponents of the non-aggressive subjects.

²Since the subject was going to be asked to make an attribution about the ambiguous intentions of the actor in each story, it did not make sense to place the subject in the role of actor and then ask him to interpret his own behavior (particularly if it was behavior the subject might never have engaged in).

³The procedure used for this part of the study is similar to that described in Steinberg & Dodge (1983).

⁴Assignment of the A and B roles to investigators and children was done randomly, with the two investigators serving in each role half the time.

⁵The aggressive and non-aggressive 5th-graders were treated as a single group because their differences remained consistent over all the target-actor combinations, i.e., they were not qualified by an interaction with dyad.

⁶These findings (that the subjects made more hostile predictions than hostile attributions, and that the majority of hostile predicted responses followed non-hostile attributions) are not unique to this study, but were also found in Dodge's original (1980) study of the attributions of aggressive boys, and are reflected in the figures presented in his Table 2, p. 168.

**Table 1 - Percentage of Subjects
Making Hostile Attributions and Hostile Predicted Responses**

Target	Actor	All Subjects		Aggressive Subjects		Non-aggressive Subjects	
		Attrib	Resp	Attrib	Resp	Attrib	Resp
1) Self	Friend	25	26	32	38	16	14
2) Self	Agg. N-F	28	36	28	48	28	25
3) Self	N-agg. N-F	20	25	32	41	8	8
4) Friend	Agg. N-F	34	55	38	62	30	48
5) Friend	N-agg. N-F	21	40	26	47	17	33
6) Agg. N-F	Friend	19	58	22	62	17	54
7) Agg. N-F	N-agg. N-F	27	61	22	59	32	62
8) N-agg. N-F	Friend	20	47	24	62	16	32
9) N-agg. N-F	Agg. N-F	27	46	30	59	24	32
Overall Mean		25	44	28	53	21	34

Abbreviations Attrib: Attributions
 Resp: Responses
 Agg. N-F: Aggressive non-friend
 N-agg. N-F: Non-aggressive non-friend

Table 2 - Association Between Attributions and Responses

Target	Actor	χ^2	p	$\mu(R- A-)^a$	$\mu(R+ A-)^b$	$\mu(A+ R-)^c$
Self	Friend	7.13	.008	50	82	53
Self	Agg. N-F	13.78	.0002	70	77	46
Self	N-agg. N-F	8.36	.005	53	83	56
Friend	Agg. N-F	6.48	.011	76	55	54
Friend	N-agg. N-F	1.41	.234	53	64	71
Agg. N-F	Friend	2.93	.087	79	47	74
Agg. N-F	N-agg. N-F	.97	.324	70	43	69
N-agg. N-F	Friend	5.12	.024	70	63	69
N-agg. N-F	Agg. N-F	6.38	.012	66	64	59
Overall Mean				66	64	60

Note. All analyses were done using the Pearson chi square test with 1 degree of freedom.

Legend:

- Superscripts: a probability of a hostile response given a hostile attribution.
b probability of a non-hostile response given a non-hostile attribution.
c probability of non-hostile attribution given a hostile response; i.e., proportion of hostile responses preceded by non-hostile attributions.

Abbreviations: Agg. N-F: Aggressive non-friend.
N-agg. N-F: Non-aggressive non-friend.

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